



# **KOALA LIGHT PEN<sup>TM</sup>**

## **Owner's Manual**

*for*  
**Commodore 64**



# **KOALA LIGHT PEN**

## **Owner's Manual**





**We make computing more personal.™**

## **ACKNOWLEDGEMENTS**

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# **Introduction**

## **WHAT IS THE KOALA LIGHT PEN?**

The Koala Light Pen with KoalaPainter software is the complete computer drawing tool! You can:

- Draw freehand using many different brushes and colors.
- Design geometric shapes of all sizes.
- Create designs on two separate viewing screens.
- Copy images from one screen to another.
- Magnify your drawings for close-up work.
- Save your designs for future enjoyment.
- Add text in eight different styles.

All DIRECTLY on your screen, with the Koala Light Pen! KoalaPainter is easy to use—simply load the program and you can create your own designs immediately. Whatever your skill level, from beginner to serious artist, hours of fun and creativity await you!

## **SYSTEM REQUIREMENTS**

- Commodore 64 Computer
- KoalaPainter Diskette
- One Disk Drive (Commodore 1541)
- Color Television or Monitor
- Koala Light Pen

# Getting Started

Turn on your disk drive.

Turn on your television or monitor.

Turn on your computer.

Insert the KoalaPainter diskette into your disk drive.

Plug your Light Pen into joystick port ONE.

When your computer indicates "READY" type:

LOAD "KP";8 (RETURN)

When your computer indicates "READY" type:

RUN (RETURN)

KoalaPainter is now loaded. It takes about a minute for the Calibration Screen to appear.

When the Calibration Screen appears, you must calibrate your pen for use. To do this, point the pen to the box indicated and press the pen against the screen ONCE. Hold the pen steady in the same spot. You will see a horizontal line travel from the top of the box toward the pen. Once it meets the pen, press the pen against the screen once again and hold it steady. Now you will see a vertical line travel from the left edge of the box toward the pen. Once it reaches the pen, the pen will be calibrated and you will be ready to draw. MAKE SURE THE CONTRAST AND BRIGHTNESS SETTINGS ON YOUR TV ARE SET TO THE NORMAL POSITION DURING CALIBRATION. IF YOU HAVE PROBLEMS CALIBRATING YOUR PEN, ADJUST THE SETTINGS.

Once the pen has been calibrated, the KoalaPainter menu will appear. You are now ready to draw. The menu offers a variety of drawing and color options. However, to become familiar with the operation of the Light Pen, let's begin with the DRAW command. The menu and its parts will be described in more detail later in the manual.

Begin with the freehand DRAW command and follow along as you go.

Point the pen to the screen, but DON'T press down yet. Move the pen around the screen and notice that a large cross is following the pen. This cross is your CURSOR. It indicates where the pen is pointing and what the pen is seeing.

Now point the pen to the SECOND BOX in the THIRD ROW. This is the freehand DRAW command. Now, with the pen and cursor pointing to the DRAW command, press the pen against the screen ONCE. You don't have to press very hard. Notice that a small arrow has now been positioned UNDER the DRAW command. This indicates it is your current choice.

Okay, now we're ready to move to the drawing screen and begin drawing. To do this, move your pen to the very bottom of the screen and press the pen ONCE. A blank drawing screen will appear.

Now, position the pen on the screen where you want to begin your drawing. Press the pen ONCE and draw. It is that simple. To stop drawing all you do is press the pen again. You can then reposition your pen anywhere on the screen and begin drawing again.

To return to the menu, simply move your pen to the bottom of the screen and press the pen ONCE. The menu will reappear and you are now ready to choose other commands, colors, or brushes. If you have trouble moving from the screen to the menu, try moving the pen off the screen and pressing the pen switch with your finger.



# **The KoalaPainter Menu**

Look at the menu screen. The screen is divided into 3 sections.

The top two rows of large boxes are COMMANDS.

The next two rows of small boxes are DRAWING COMMANDS, BRUSH OPTIONS, and TEXT OPTIONS.

The bottom row is the COLOR and PATTERN menu.

For COMMANDS, DRAWING, BRUSHES, and TEXT OPTIONS you always point the pen directly to the selection and press the pen once.

In the case of COMMANDS, the box will blink on and off, indicating it is your current choice.

In the case of DRAWING, BRUSHES, and TEXT OPTIONS, a small arrow will be positioned under the current choice.

When selecting COLORS and PATTERNS, you point the pen to the white strip above your color choice (for patterns, point the pen to the white strip below your pattern choice) and press the pen. The color of the screen will change to your chosen color, indicating it is the current color.

Now, let's take a closer look at COLORS, PATTERNS, BRUSHES, and TEXT.

## **THE COLOR PALETTE**

The color palette is composed of 16 solid colors and 16 patterns.

The patterns are located directly below the solid colors.

The patterns are composed of the currently selected color and the solid color directly above it.

There are over 120 possible pattern combinations.

The arrow located to the left of the palette indicates whether a solid color or pattern is the current choice.

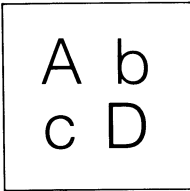
Notice the box located to the left of the BRUSHES. This is the CURSOR selector box. There are two cursors available. The CROSS cursor which is used for drawing on light backgrounds and the BOX cursor which is used for drawing on dark backgrounds. To change cursors, simply point the pen inside the box and press once. If you are using the CROSS cursor and are having difficulty making it follow the pen, try switching to the BOX cursor. If you still have difficulty try adjusting your brightness and contrast levels on your TV or monitor.

## THE BRUSH SET

There are eight different brushes to choose from.

Any of the drawing functions may be done with any brush choice.

Your current brush choice is indicated by an arrow underneath the brush box.



## THE TEXT STYLES

There are eight different text styles to choose from. Notice the TEXT symbol located to the right of the BRUSHES OPTIONS. To select one of the eight text styles, you simply point the pen to the TEXT symbol and press the pen once.

The different text styles are selected from the BRUSHES OPTIONS row. Each brush symbol stands for a different style of text, from standard text to varying sizes and styles of text. To select a text style:

Point the pen to one of the eight brush symbols and select that symbol.

Point the pen to the TEXT symbol and press down once. The drawing screen will now appear.

Point the pen to the place on the screen where you want to add text and press the pen once. (Notice a frame will appear with the cursor. The size of this frame will give you an idea of the size of the text.)

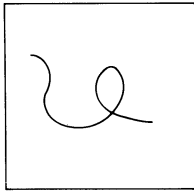
Now, go ahead and type in your text.

Press RETURN to begin a new line, or press RETURN TWICE to reposition the cursor or move to the bottom of the screen and return to the menu.

You can add text in any color, anywhere on the screen. Take some time now to experiment with the different type styles and familiarize yourself with them.

# Commands

Now, let's take a look at each command and option, in detail.  
Again, experimenting with each command and option as you read along is recommended.

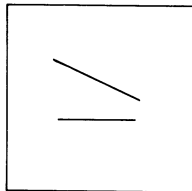


**DRAW**—freehand drawing.

Move the pen to the point where you want to begin drawing and press once.

Begin drawing **WITHOUT** putting pressure on the screen.

To stop drawing, press the pen once.



**LINE**—draws individual straight lines.

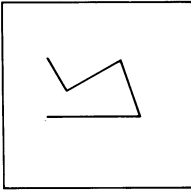
Position the pen where you want to begin your line.

Press the pen once to anchor the beginning point.

Stretch the line in the desired direction and the desired length.

Press the pen once again to fix the direction and length.

Now, the line will be “fixed” to the end of the pen and you can move it anywhere on the screen you desire. Once you have the correct placement, press the pen once again. The line will now be fixed in this location.



**LINES**—draws lines that are connected end-to-end.

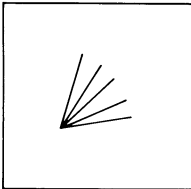
Position the pen where you want to begin your first line.

Press the pen to anchor the beginning point.

Stretch the line in the desired direction and the desired length.

Press the pen once to fix the position and begin another line.

Repeat for more lines. To finish, move the pen to the bottom of the screen and press once. This will return you to the menu screen.



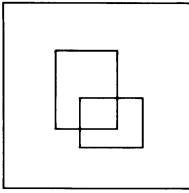
**RAYS**—makes lines that radiate from one point.

Point the pen to the starting point and press once.

Move the pen to another point on the screen and press the pen down and HOLD IT DOWN while moving the pen around the screen to get the radiating ray effect.

Press the pen once more to stop.

To get out of the ray command, simply move your pen to the bottom of the screen and press the pen once.



**FRAME**—makes rectangular frames.

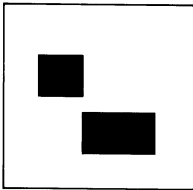
Point your pen to where you want to place a corner of the frame.

Press the pen once to anchor the first corner.

Move the pen around the screen, stretching the frame to the size and positioning you want.

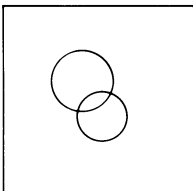
When the frame is the desired size, press the pen once.

Now, the frame will fix itself to the pen and you can move it to the correct location on the screen. Once you have it positioned correctly, press the pen once to fix the position permanently.



**BOX**—creates a frame that automatically fills with the selected color or pattern.

Follow the same procedure as the frame command.



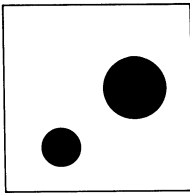
**CIRCLE**—makes a circle.

Point the pen to where you want to locate the outer edge of the circle.

Press the pen once to begin making the circle.

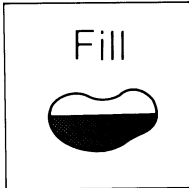
Stretch the circle until it reaches the desired size and press the pen once to fix the size.

The circle will fix itself to the pen and you can move it around the screen to the desired location. Once you have the placement you want, simply press the pen once and your circle will be placed permanently.



**DISC**—creates a circle that automatically fills with the selected color or pattern.

Follow the same procedure as in the circle command.



**FILL**—fills in specified enclosed areas with color or pattern.

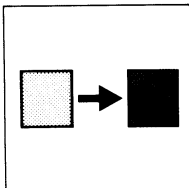
Select a color or pattern to fill with from the color palette.

Select FILL.

Move to your drawing screen.

Point the pen inside the area you wish to fill and press the pen once.

See the Hints and Explanations section for further information on the fill command.



**X-COLOR**—“Exchange Color”—replaces a color in your design automatically with another color.

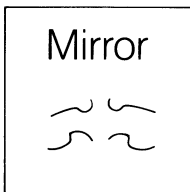
Select X-COLOR.

Select a new color (not a pattern) from the color pattern and move to the drawing screen.

Point the pen to the color that you wish to change.

Press the pen once and instantly all areas that were the old color will change to the new color.

See the Hints and Explanations section for further information on the X-COLOR command.



**MIRROR**—creates four-way mirrored images using the current drawing command.

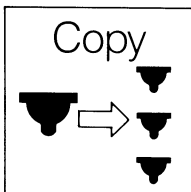
Select a drawing command such as DRAW, LINE or CIRCLE.

Select MIRROR. The screen will flash briefly, and the word MIRROR will blink.

Move to the drawing screen and follow the instructions for the selected drawing command.

Whatever you create will be mirrored in all corners of the screen.

To cancel MIRROR, select MIRROR a second time. The word "MIRROR" will stop blinking.



**COPY**—copies a portion of a picture to any other area on your drawing screen.

Select COPY from the menu and move to the drawing screen.

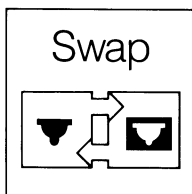
"Frame" the area you wish to copy using the same instructions as in the frame command.

After framing the area, the copy "frame" will fix itself to the pen and you can move it to the area on your drawing screen where you want to copy the image.

Once you have the "frame" placed correctly, press the pen once.

You will see an exact copy at that location.

You can continue copying that portion of your drawing anywhere on the screen, over and over again. To stop copying, simply point the pen to the bottom of the screen and press once to return to the menu.



**SWAP** – allows movement between two drawing screens.

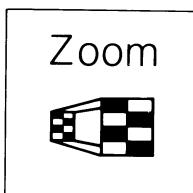
Select SWAP from the menu. Your drawing screen will appear.  
This is screen "A".

Point the pen to the screen and press once.

You will be "swapped" to a blank screen, screen "B."

Each time you press the pen to the screen, you will be "swapped"  
from screen "A" to "B" and vice versa.

You can create designs on screen A and copy them to screen B, or vice versa—by using the SWAP and COPY commands together. See the Hints and Explanations section for information on how to do this.



**ZOOM** – magnifies designs for close-up detail work.

Select ZOOM from the menu. Your drawing screen will appear. There will be a rectangular frame on the screen.

Point the pen to the frame and it will fix itself to the pen tip and follow the pen around the drawing screen.

Position the frame over the area you wish to magnify and press the pen once.

After pressing the pen, you will see the framed area enlarged at the bottom of your screen. You will also see the actual size framed area on the top of your screen.

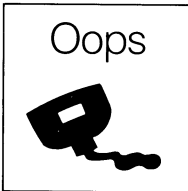
You can move the cursor around in either area—the bottom area to do detailed editing, and the top area to reposition the magnifying frame.



Notice the color palette at the bottom of the screen. You can select different colors while you are editing. You can draw or do a point by point edit while in the ZOOM command.

It is easier to edit your work if you use the smallest brush.

To reposition the mirror frame, simply move the pen out of the magnified area, up into the normal screen size area and point the pen to the new area you wish to magnify. Press the pen once and you will see a magnified version of the new area in the magnified area below.



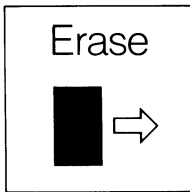
**OOPS**—lets you change your mind by cancelling your most recent drawing command.

If you happen to draw something you don't like very well, or you make a mistake (it can happen!) you can fix it by moving back to the screen and selecting the OOPS command.

The screen will flash to acknowledge the command.

Now, when you move back to your screen your picture will be the same as it was before the last command you used.

**REMEMBER**, if you draw four frames and don't like the last one, when you select OOPS, all four frames will be erased, since they are all the same command. OOPS can only be used to undo the most recent command.



**ERASE**—erases everything on the drawing screen.

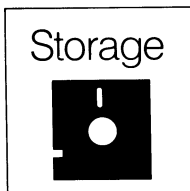
When you want to erase the entire screen, point the pen to the ERASE command and press once.

The screen will flash to acknowledge the command.

If you are sure you want to erase your picture, press the pen once again.

The screen will flash again to acknowledge the command, the word "ERASE" will stop blinking and your picture will be gone.

If you accidentally erase your picture, select OOPS to bring it back.



**STORAGE**—lets you store and retrieve pictures on disk.

Now that you have mastered all of the wonderful KoalaPainter commands you probably have something that you would like to save so you can look at it later. To do this you have to do several things.

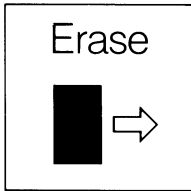
### **Initializing a Disk**

Select the STORAGE command from the menu. You will see a new screen with several options available to you. We will look at these options one at a time. The first thing you must do is initialize a blank disk so you can save your drawing.

Remove the KoalaPainter disk from your disk drive.

Insert a blank disk and close the drive door.

Point the pen to the INIT DISK command in the lower right corner of the screen and press once.



**ERASE**—erases everything on the drawing screen.

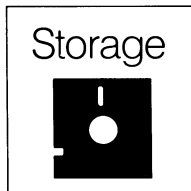
When you want to erase the entire screen, point the pen to the ERASE command and press once.

The screen will flash to acknowledge the command.

If you are sure you want to erase your picture, press the pen once again.

The screen will flash again to acknowledge the command, the word "ERASE" will stop blinking and your picture will be gone.

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Remove the KoalaPainter disk from your disk drive.

Insert a blank disk and close the drive door.

Point the pen to the INIT DISK command in the lower right corner of the screen and press once.

At the bottom of the screen you will be asked if you want to erase the disk. Type "Y" for yes. REMEMBER, THIS WILL ERASE ANYTHING THAT HAS BEEN PREVIOUSLY STORED ON THIS DISK.

Now you will be asked to type in a disk name. You can type in anything up to twelve characters long. After you have typed in the disk name, press RETURN and your disk will begin formatting. This will take awhile, so be patient.

Once this is complete you will see the name of your new disk at the top of the screen and you will have 16 empty filenames to use for saving your drawings.

## **Saving Pictures**

To save a picture you have drawn use the NAME and SAVE command.

Point the pen to the NAME and SAVE command located at the bottom of the STORAGE screen and press once. The word "NAME" will be fixed to your pen and you can move it up to one of the sixteen empty filename areas above.

Position the pen over an empty file name and press once.

Now, type in a name for your drawing that is no longer than eight characters.

Press RETURN and the disk will spin and your drawing will be saved to disk.

If you want to continue working on your drawing you can do so and then save any changes by using the SAVE command. The SAVE command allows you to save changes to an already existing file.

After you have made changes to your already saved picture, simply select the STORAGE command and point the pen to the SAVE command located at the bottom of the screen. Press the pen once.

The word SAVE will be fixed to your pen and you can move it up to the file containing the saved version of your drawing.

Once you have the pen positioned over the correct filename, press once. The disk will spin and the changed version of your drawing will be saved over the original version.

## **Retrieving Stored Pictures**

Pretty soon you will have a whole disk full of drawings you have created. To retrieve an existing drawing, point the pen to the GET command at the bottom of the screen. Press the pen once.

The word GET will be fixed to your pen and you can move it up to the file containing the drawing you want to retrieve.

Once you have the pen positioned over the correct filename, press once. The disk will spin and the drawing will be retrieved.

Whenever you want to move from the STORAGE screen back to the menu you simply point the pen to the bottom of the screen and press once.

## **Changing Disks**

One final thing about storage. Eventually you will have MANY disks full of drawings you have created. Each time you wish to retrieve a picture from a different disk you need to use the CHANGE DISK command.

Remove the KoalaPainter or current picture disk from your disk drive and insert the picture disk you want to retrieve from or save to next.

Point the pen to the CHANGE DISK command and press once.

The disk will spin and after a moment or so the new disk and picture file names will appear on the STORAGE screen. You can now save or retrieve anything on this disk.

# Hints and Explanations

## ERROR MESSAGES

Various error messages may appear in the bottom status line of the STORAGE menu if something goes wrong. These error messages come from the disk drive itself—you should consult your disk drive manual to see what the problem is.

## COPYING BETWEEN SCREENS

Select the SWAP command and swap between screens until the picture you want to copy from is on the screen.

Return to the menu and select COPY. Copy the area you want using the COPY COMMAND.

The screen will automatically swap to the second screen and your COPY frame will be floating on the screen. Using the pen, position the frame to where you want to copy your drawing and press the pen once.

You can copy the same picture over and over again, or you can move the pen to the bottom of the screen and press once to return to the first screen. When you return to the first screen you can copy more portions of your drawing and move them to the second screen.

You can repeat this as many times as you like. When you are finished copying, just go back to the menu screen.

## FILL

The FILL command cannot be used to fill over a pattern. It can only be used to fill over a solid color.

When filling an area you have drawn freehand, be very careful that the border of the area has “no holes” – not even small ones. If it does, the fill color will “spill out” of the area and fill other areas as well. If this happens, just point your pen to the bottom of the screen, return to the menu and select OOPS. Then, using your ZOOM command you can go back in and repair the “holes” and refill.

If you have drawn a symmetrical pattern with MIRROR on, you can also FILL it symmetrically by leaving MIRROR on while filling.

## **XCOLOR**

When you start out, the background for every picture is white. You can change the background by first selecting the new color, then selecting XCOLOR and replacing the background white with the new color.

If you change the background color of a picture and then erase it, the blank screen will be in the new background color instead of white.

## **ERASING SMALL AREAS**

To erase only part of your picture (in case you made a small mistake), select the background color from the color palette and then select a brush to use as an eraser. Select the DRAW command and then return to the drawing screen and draw over the area you want to erase.

To erase a larger area, use the BOX command instead of DRAW. You can cover up a large mistake by “erasing” it with a box in the background color.

# **Technical Notes**

## **COLOR COLLISIONS**

Occasionally, you may notice peculiar color responses—colors “changing out from under you”—when you attempt to use several different colors in a small area of the screen. Although you have many different colors to choose from, the Commodore 64 hardware only allows you to have four separate colors (including the background color) in each 8 by 8 dot area of the screen. So if you try to add a fifth color, one of the first four has to change. This is called “color collision” and can be avoided only by being careful not to try to get too many colors in a small area.

## **PRINTING YOUR PICTURES**

You cannot print your KoalaPainter pictures directly from KoalaPainter. Koala Technologies will soon offer a separate product, KoalaPrinter for the Commodore 64, which will allow you to print your Koala Light Pen pictures. Call 1 (800) KOA BEAR for availability information.

## **PHOTOGRAPHING YOUR PICTURES**

- Use Kodachrome 64 daylight film for slides or Kodacolor VR100 for photographs.
- Position your camera using a tripod.
- Take pictures in a darkened room or arrange a hood over the screen to shelter it from light reflections.
- Set your camera's shutter speed for one second; use a light meter to determine the aperture.

## **DISK DRIVES**

We recommend you use the Commodore 1541 disk drive with KoalaPainter. Other disk drives may or may not work correctly. Many higher-speed drives use parallel (IEEE) interfaces that may not be able to load and run KoalaPainter.



## DISPLAYING PICTURES FROM BASIC

The following is a BASIC program (with a machine language subroutine for speed) which lets you display your KoalaPainter pictures without loading and running KoalaPainter itself. Type in this program carefully and save it to disk. (If you make a mistake typing any of the DATA statements, the program will halt with an error message. Re-check your typing.)

```
1  REM DISPLAY A KOALAPainter[TM] SCREEN
10 IF A = 1 GO TO 130
20 FOR A = 49154 TO 49320
30 READ I: T = T + I: POKE A, I
40 NEXT
50 IF T= 22747 GO TO 70
60 PRINT "ERROR IN DATA STATEMENTS!": STOP
70 INPUT "WHICH PICTURE"; A$
80 IF RIGHT$(A$, 1) = "*" GO TO 100
90 A$ = A$+" " "REM 14 SPACES
100 F$ = CHR$(129) + LEFT$(A$, 14)
110 FC = PEEK (53281): CC = PEEK (646)
120 PRINT "LOADING..." : A = 1: LOAD F$, 8, 1
130 SYS 49154
140 WAIT 653, 1: WAIT 653, 1, 1
150 POKE 53265, PEEK (53265) AND 223
160 POKE 53272, (PEAK (53272) AND 240) OR 4
170 POKE 53270, PEEK (53270) AND 239
180 POKE 53281, FC: POKE 646, CC
190 PRINT CHR$(147)
200 END
49154 DATA 173, 17, 208, 41, 239, 9, 32, 141
49162 DATA 17, 208, 173, 22, 208, 41, 223, 9
49170 DATA 16, 141, 22, 208, 173, 24, 208, 41
49178 DATA 240, 9, 8, 141, 24, 208, 76, 43
49186 DATA 192, 173, 17, 208, 41, 239, 141, 17
49194 DATA 208, 162, 127, 160, 64, 134, 252, 132
49202 DATA 251, 162, 4, 160, 0, 134, 254, 132
49210 DATA 253, 162, 131, 160, 39, 32, 127, 192
49218 DATA 162, 131, 160, 40, 134, 252, 132, 251
49226 DATA 162, 216, 160, 0, 134, 254, 132, 253
49234 DATA 162, 135, 160, 15, 32, 127, 192, 173
49242 DATA 16, 135, 141, 33, 208, 162, 96, 160
49250 DATA 0, 134, 252, 132, 251, 162, 32, 160
49258 DATA 0, 134, 254, 132, 253, 162, 127, 160
```

49266 DATA 63, 32, 127, 192, 173, 17, 208, 9  
49274 DATA 16, 141, 17, 208, 96, 142, 1, 192  
49282 DATA 140, 0, 192, 160, 0, 177, 251, 145  
49290 DATA 253, 165, 252, 205, 1, 192, 208, 8  
49298 DATA 165, 251, 205, 0, 192, 208, 1, 96  
49306 DATA 230, 251, 208, 2, 230, 252, 230, 253  
49314 DATA 208, 227, 230, 254, 76, 135, 192

To display a picture, follow these steps:

- Insert the diskette containing the above display program.
- If the picture is on a different diskette, remove the first diskette and insert the one with the picture.
- RUN the program.
- The program will prompt you WHICH PICTURE?. Type in the name of the picture as you see it in KoalaPainter's Storage menu, for example PIC I BEAUTY, and hit [RETURN]. Your program will be loaded and displayed. (This takes about 30 seconds on a Commodore 1541 drive.)
- The picture will remain on the screen until you press and release either [SHIFT] key.

## **USING KOALAPainter PICTURES IN YOUR OWN PROGRAMS**

You can use KoalaPainter pictures in your own programs. For example, if you wanted to load a KoalaPainter picture as a title page while the rest of your program was loading or setting up, you could replace line 140 of the display program with a LOAD or GOTO to execute your own code. You just have to make sure to set the screen mode back to normal if necessary. (This is what lines 150–180 do.)

## SLIDE SHOW

You can also convert the BASIC display program into a slide show. When you RUN it, it will loop through all the pictures on a diskette, displaying them one at a time. After displaying the last picture on the disk, the slide show returns to the first picture and starts over.

To convert the display program into the slide show program, simply replace lines 1—200 with the following. Lines 49154—49314 are unchanged.

```
1  REM KOALAPAINTER[TM] SCREEN SLIDE SHOW
10 IF A = 1 GO TO 150
20 OPEN 15, 8, 15, "I"
30 FOR A = 49154 TO 49320
40 READ I: T = T + I: POKE A, I: NEXT
50 IF T = 22747 GO TO 70
60 PRINT "ERROR IN DATA STATEMENTS!": STOP
70 L = ASC ("A"): REM START WITH PIC A
80 F$ = CHR$ (129) + "PIC" + CHR$(L) + "***"
90 OPEN 2, 8, 2, "0:" + F$ + ", P, R"
100 INPUT #15, E, M$, T, B: CLOSE 2
110 IF E = 0 GO TO 140
120 IF L = ASC ("A") THEN PRINT "NO PICTURES ON DISK.": END
130 GO TO 70
140 A = FRE(0): A = 1: LOAD F$, 8, 1
150 IF F THEN SYS 49187: GO TO 170
160 F = 1: SYS 49154
170 L = L + 1: GO TO 80
```

## PICTURE FORMAT

The KoalaPainter picture format is described below. The addresses shown are those which the picture occupies after being loaded into memory (e.g., with a BASIC "LOAD file,8,1" command).

24576–32575    High resolution bitmap (8000 bytes)

\$6000–\$7F3F

32576–33575    Color memory 1 (1000 bytes)

\$7F40–\$8327

33576–34575    Color memory 2 (1000 bytes)

\$8328–\$8705

34576            Background color (1 byte)

\$8710

## **LIMITED 90 DAY WARRANTY**

Koala Technologies Corporation will repair or replace this product free of charge if it is found defective in materials or workmanship within 90 days from the date of purchase. Simply send it prepaid to Koala Technologies Corporation, 3100 Patrick Henry Drive, Santa Clara, CA 95052-8100 who will, within its sole discretion, either repair or replace the product.

This guarantee applies only to the original registered purchaser whose Warranty Card has been completed and mailed within 10 days of purchase. Tampering, abuse, or unauthorized repairs will void this warranty.

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After warranty expiration, defective products should be returned to Koala Technologies Corporation for repair and refurbishing. A flat fee of \$20.00 is charged to cover repair and refurbishing of the light pen plus a \$5.00 handling fee. Send your defective product, check or money order for \$25.00 and a letter with your name and full return mailing address, describing the defect to Koala Technologies at the address above.

# Diskette Exchange Form

(please print clearly)

If you want to replace a damaged Koala software diskette, send the diskette back to Koala with a check or money order for eight dollars (\$8.00) and we'll send you a replacement diskette.

NOTE: ONLY ORIGINAL KOALA SOFTWARE DISKETTES SOLD WITH KOALA PRODUCTS MAY BE EXCHANGED UNDER THIS POLICY.

Return this form with your damaged diskette and check for \$8.00 to:

**KOALA TECHNOLOGIES CORPORATION**  
Dept. D  
Patrick Henry Drive  
Santa Clara, CA 95052-8100

Name of Program \_\_\_\_\_

Reason for Exchange \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Telephone ( \_\_\_\_\_ ) \_\_\_\_\_







**Part No. 00580-001**

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